

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Charles Fredericks on May 13, 2010.

The application has been amended as follows:

1. (Currently Amended) A wireless sensor probe comprising:
 - a probe body for placement into the ground; said probe body having an interior, an exterior, a top and a bottom;
 - a stabilizing gasket member secured on and extending out from an external side surface of said probe body between said top and bottom of said probe body such that said stabilizing gasket member is positioned completely beneath the ground when said wireless sensor probe is inserted into the ground; said stabilizing gasket having an annular shape with a top surface facing a top of said probe body and a side surface increasing in size from a bottom portion of said stabilizing gasket to a top portion of said stabilizing gasket such that said stabilizing gasket allows insertion of said wireless sensor probe into the ground and resists said wireless sensor probe from being moved upwards from said ground;
 - a mast member including one or more sensor devices for sensing a soil property surrounding the probe body when the probe body is inserted into the ground; and
 - a top member selectively removable from a top of said probe body;

wherein the mast member is configured to removably fit within the interior of the probe body; and,

wherein the interior of the probe body is selectively enclosable with the top member; and, wherein the wireless sensor probe is further configured to wirelessly transmit data from the one or more sensor devices.

2-5. (Canceled)

6. (Previously Presented) The wireless sensor probe of claim 1, further comprising: a collar situated near a top portion of the probe body.

7. (Previously Presented) The wireless sensor probe of claim 1, wherein the mast member further comprises a battery.

8. (Previously Presented) The wireless sensor probe of claim 1, further comprising a wireless transceiver circuit in communication with said sensor devices.

9. (Previously Presented) The wireless sensor probe of claim 1, wherein the top member connects to the probe body by an arrangement selected from the following: a screw mount, a bayonet type mount and a flange mount.

10. (Previously Presented) The wireless sensor probe of claim 1, wherein the top member comprises a solar cell panel.

11. (Previously Presented) The wireless sensor probe of claim 1, wherein the top member comprises a data display.

12. (Original) The wireless sensor probe of claim 11, wherein the data display comprises one of an LED display or an LCD display.

13. (Previously Presented) The wireless sensor probe of claim 1, wherein a shape of the probe body is selected from a round shape, a hexagon shape, a rectangular shape, a triangular shape, and a cross-beam shape.

14-48. (Canceled)

49. (Currently Amended) The wireless sensor probe of claim 1, wherein ~~the sensor member~~ one or more sensor devices further comprise ~~comprises~~ sensor components selected from the following group: an air temperature sensor, a relative humidity sensor, a light level sensor, a soil moisture sensor, a soil temperature sensor, a soil dissolved oxygen sensor, a soil pH sensor, a soil conductivity sensor, and a soil dielectric frequency response sensor.

50. (Currently Amended) A wireless soil sensor having selectively joinable components, the wireless soil sensor comprising:

a probe body having an opening into an interior of the probe body and a top end and a bottom end;

a stabilizing gasket member secured to an outer side surface of said probe body so as to prevent flow of water between said stabilizing gasket member and said probe body when located completely in the soil; said stabilizing gasket having an annular shape with a top surface facing a top of said probe body and a side surface increasing in width from a bottom portion of said stabilizing gasket to a top portion of said stabilizing gasket such that said stabilizing gasket allows insertion of said wireless soil sensor into the ground and resists said wireless soil sensor from being moved upwards from said ground;

a component mast comprising sensor circuitry; said component mast being user-insertable into the opening into the interior of the probe body; and,

a probe top selectively engagable with the probe body so as to cover the opening into the interior of the probe body;

wherein the wireless soil sensor is further configured to wirelessly transmit data from the sensor circuitry; and,

wherein said stabilizing gasket member is located between said top end and said bottom end of said probe body.

51. (Previously Presented) The wireless soil sensor of claim 50, wherein the component mast connects to the probe top.

52. (Previously Presented) The wireless soil sensor of claim 50 further comprising a plurality of sensor components.

53. (Previously Presented) The wireless soil sensor of claim 52, wherein at least a portion of the plurality of sensor components are positioned along a length of the probe body.

54. (Canceled)

55. (Previously Presented) The wireless soil sensor of claim 50, wherein the sensor circuitry further comprises sensor components selected from the following group: an air temperature sensor, a relative humidity sensor, a light level sensor, a soil moisture sensor, a soil temperature sensor, a soil dissolved oxygen sensor, a soil pH sensor, a soil conductivity sensor, and a soil dielectric frequency response sensor.

56. (Previously Presented) The wireless soil sensor of claim 50, wherein the probe top connects to the probe body by an arrangement selected from the following: a screw mount, a bayonet type mount and a flange mount.

57. (Previously Presented) The wireless soil sensor of claim 50, wherein said component mast further comprises a battery.

58. (Currently Amended) The wireless soil sensor of claim 50, wherein said probe top part further comprises a display.

59. (Currently Amended) The wireless soil sensor of claim 50, wherein said probe top part further comprises a solar cell.

60. (Canceled)

61. (Canceled)

62. (Currently Amended) The wireless sensor probe of claim 50 ~~60~~, wherein said stabilizing gasket member is a rubber ring.

63. (Currently Amended) The wireless sensor probe of claim 1 ~~50~~, wherein said stabilizing gasket member is further positioned so as to minimize flow of water down said probe body.

64. (Canceled)

65. (Currently Amended) The wireless sensor probe of claim 1 ~~64~~, wherein said stabilizing gasket member is a rubber ring.

66. (Currently Amended) A wireless sensor probe comprising:

a probe body for placement into the ground; said probe body having an interior, an exterior, a top and a bottom;

a stabilizing gasket member secured on an external side surface of said probe body between said top and bottom of said probe body such that said stabilizing gasket member is positioned completely beneath the ground when said wireless sensor probe is inserted into the ground; said stabilizing gasket having an annular surface facing a top of said probe body and a side surface decreasing in size from a top portion of said

stabilizing gasket to a bottom portion of said stabilizing gasket such that said stabilizing gasket allows insertion of said wireless sensor probe into the ground and resists said wireless sensor probe from being moved upwards from said ground;

a mast member;

one or more sensor devices for sensing a soil property surrounding the probe body when the probe body is inserted into the ground; and

a top member selectively removable from a top of said probe body;

wherein the mast member is configured to removably fit within the interior of the probe body; and,

wherein the interior of the probe body is selectively enclosable with the top member; and, wherein the wireless sensor probe is further configured to wirelessly transmit data from the one or more sensor devices.

2. The following is an examiner's statement of reasons for allowance: the primary reason for allowance of the claims is that the prior art fails to teach or suggest a wireless sensor probe comprising:

a probe body for placement into the ground; said probe body having an interior, an exterior, a top and a bottom;

a mast member including one or more sensor devices for sensing a soil property surrounding the probe body when the probe body is inserted into the ground; and

a top member selectively removable from a top of said probe body;

wherein the mast member is configured to removably fit within the interior of the probe body; and,

along with

a stabilizing gasket secured on and extending out from an external side surface of said probe body between said top and bottom of said probe body such that said

stabilizing gasket is positioned completely beneath the ground when said wireless sensor probe is inserted into the ground; said stabilizing gasket having an annular shape with a top surface facing a top of said probe body and a side surface increasing in size from a bottom portion of said stabilizing gasket to a top portion of said stabilizing gasket such that said stabilizing gasket allows insertion of said wireless sensor probe into the ground and resists said wireless sensor probe from being moved upwards from said ground;

wherein the interior of the probe body is selectively enclosable with the top member; and, wherein the wireless sensor probe is further configured to wirelessly transmit data from the one or more sensor devices.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashmiya S. Fayyaz whose telephone number is 571-272-2192. The examiner can normally be reached on Tuesdays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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